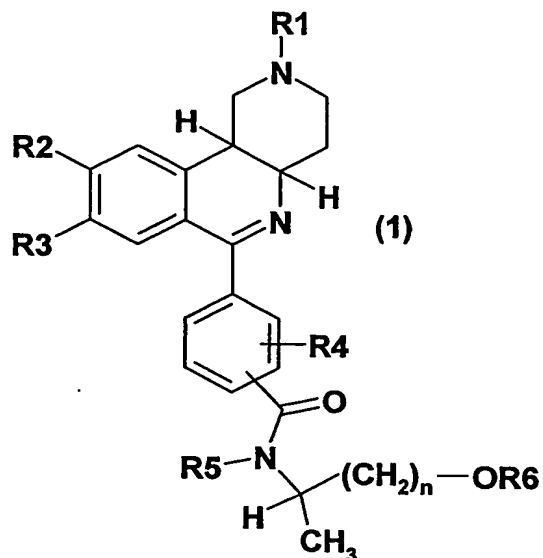


Patent claims

1. A compound of formula 1,



in which

R1 is 1-4C-alkyl,

R2 is hydroxyl, 1-4C-alkoxy, 3-7C-cycloalkoxy, 3-7C-cycloalkylmethoxy, or 1-4C-alkoxy which is completely or predominantly substituted by fluorine,

R3 is hydroxyl, 1-4C-alkoxy, 3-7C-cycloalkoxy, 3-7C-cycloalkylmethoxy, or 1-4C-alkoxy which is completely or predominantly substituted by fluorine,

or in which

R2 and R3 together are a 1-2C-alkylenedioxy group,

R4 is hydrogen, halogen, nitro, 1-4C-alkyl, trifluoromethyl or 1-4C-alkoxy,

R5 is hydrogen or 1-8C-alkyl,

R6 is hydrogen, 1-8C-alkylcarbonyl, 3-7C-cycloalkylcarbonyl, 3-7C-cycloalkylmethylcarbonyl, Arylcarbonyl or Aryl-1-4C-alkylcarbonyl bedeutet,

Aryl is phenyl or phenyl substituted by R7 and/or R8,

R7 is halogen, nitro, 1-4C-alkyl or 1-4C-alkoxy,

R8 is halogen, nitro, 1-4C-alkyl or 1-4C-alkoxy,

n is 1 or 2,

a salt or an N-oxide thereof or a salt of the latter.

2. A compound of formula 1 as claimed in claim 1, in which

R1 is 1-4C-alkyl,

R2 is 1-4C-alkoxy, 3-6C-cycloalkoxy, 3-6C-cycloalkylmethoxy, or 1-4C-alkoxy which is completely or predominantly substituted by fluorine,

R3 is 1-4C-alkoxy, 3-6C-cycloalkoxy, 3-6C-cycloalkylmethoxy, or 1-4C-alkoxy which is completely or predominantly substituted by fluorine,

R4 is hydrogen, halogen, nitro, 1-4C-alkyl, trifluoromethyl or 1-4C-alkoxy,

R5 is hydrogen or 1-4C-alkyl,

R6 is hydrogen, 1-4C-alkylcarbonyl, 3-7C-cycloalkylcarbonyl, 3-7C-cycloalkylmethylcarbonyl, Aryl-carbonyl or Aryl-1-2C-alkylcarbonyl,

Aryl is phenyl or phenyl substituted by R7 and/or R8,

R7 is halogen, nitro, 1-4C-alkyl or 1-4C-alkoxy,

R8 is halogen, nitro, 1-4C-alkyl or 1-4C-alkoxy,

n is 1 or 2,

a salt or an N-oxide thereof or a salt of the latter.

3. A compound of formula 1 as claimed in claim 1, in which

R1 is methyl,

R2 is 1-4C-alkoxy,

R3 is 1-4C-alkoxy,

R4 is hydrogen,

R5 is 1-4C-alkyl,

R6 is hydrogen, 1-4C-alkylcarbonyl, Arylcarbonyl or Aryl-1-2C-alkylcarbonyl,

Aryl is phenyl or phenyl substituted by R7 and/or R8,

R7 is nitro, 1-2C-alkyl or 1-2C-alkoxy,

R8 is 1-2C-alkoxy,

n is 1 or 2,

a salt or an N-oxide thereof or a salt of the latter.

4. A compound of formula 1 as claimed in claim 1, in which

R1 is methyl,

R2 is methoxy or ethoxy,

R3 is methoxy,

R4 is hydrogen,

R5 is isopropyl,

and in which either

R6 is hydrogen, phenylcarbonyl, benzylcarbonyl, 4-nitrophenylcarbonyl, 3,4-dimethoxyphenylcarbonyl, 3,5-dimethoxyphenylcarbonyl or acetyl and

n is 1,

or

R6 is phenylcarbonyl, benzylcarbonyl or 3,4-dimethoxybenzylcarbonyl and
n is 2,

a salt or an N-oxide thereof or a salt of the latter.

5. A compound of formula 1 as claimed in claim 1, in which

R1 is methyl,

R2 is methoxy or ethoxy,

R3 is methoxy,

R4 is hydrogen,

R5 is isopropyl,

and in which either

R6 is hydrogen, benzylcarbonyl, 4-nitrophenylcarbonyl, 3,4-dimethoxyphenylcarbonyl, 3,5-dimethoxyphenylcarbonyl or acetyl and

n is 1,

or

R6 is phenylcarbonyl, benzylcarbonyl or 3,4-dimethoxybenzylcarbonyl and

n is 2,

a salt or an N-oxide thereof or a salt of the latter.

6. A compound of formula 1 as claimed in claim 1 selected from

Phenyl-acetic acid (S)-2-({1-[4-((4aR,10bS)-9-ethoxy-8-methoxy-2-methyl-1,2,3,4,4a,10b-hexahydro-benzo[c][1,6]naphthyridin-6-yl)-phenyl]-methanoyl}-isopropyl-amino)-propyl ester,

Benzoic acid (S)-2-({1-[4-((4aR,10bS)-9-ethoxy-8-methoxy-2-methyl-1,2,3,4,4a,10b-hexahydro-benzo[c][1,6]naphthyridin-6-yl)-phenyl]-methanoyl}-isopropyl-amino)-propyl ester,

3,4-Dimethoxy-benzoic acid (S)-2-({1-[4-((4aR,10bS)-9-ethoxy-8-methoxy-2-methyl-1,2,3,4,4a,10b-hexahydro-benzo[c][1,6]naphthyridin-6-yl)-phenyl]-methanoyl}-isopropyl-amino)-propyl ester,

3,5-Dimethoxy-benzoic acid (S)-2-({1-[4-((4aR,10bS)-9-ethoxy-8-methoxy-2-methyl-1,2,3,4,4a,10b-hexahydro-benzo[c][1,6]naphthyridin-6-yl)-phenyl]-methanoyl}-isopropyl-amino)-propyl ester,

Acetic acid (S)-2-({1-[4-((4aR,10bS)-9-ethoxy-8-methoxy-2-methyl-1,2,3,4,4a,10b-hexahydro-benzo[c][1,6]naphthyridin-6-yl)-phenyl]-methanoyl}-isopropyl-amino)-propyl ester,

Benzoic acid 3-({1-[4-((4aR,10bS)-9-ethoxy-8-methoxy-2-methyl-1,2,3,4,4a,10b-hexahydro-benzo[c][1,6]naphthyridin-6-yl)-phenyl]-methanoyl}-isopropyl-amino)-butyl ester,

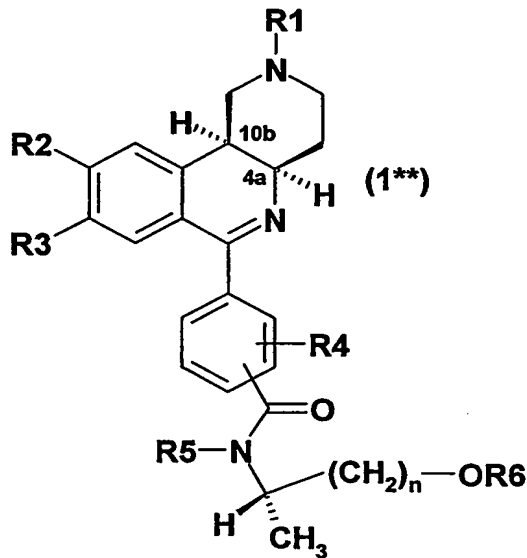
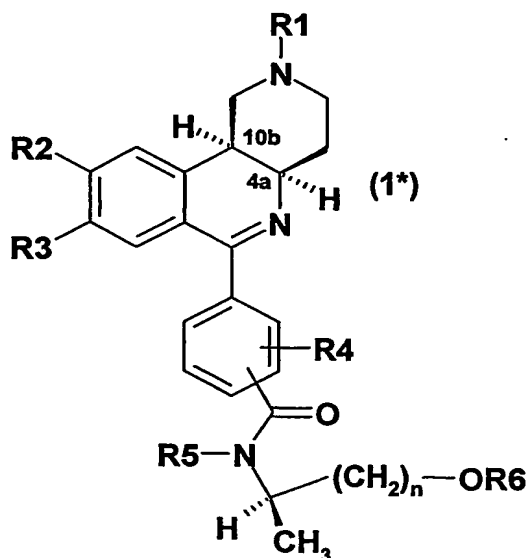
Phenyl-acetic acid 3-({1-[4-((4aR,10bS)-9-ethoxy-8-methoxy-2-methyl-1,2,3,4,4a,10b-hexahydro-benzo[c][1,6]naphthyridin-6-yl)-phenyl]-methanoyl}-isopropyl-amino)-butyl ester,

(3,4-Dimethoxy-phenyl)-acetic acid 3-({1-[4-((4aR,10bS)-9-ethoxy-8-methoxy-2-methyl-1,2,3,4,4a,10b-hexahydro-benzo[c][1,6]naphthyridin-6-yl)-phenyl]-methanoyl}-isopropyl-amino)-butyl ester,

4-Nitro-benzoic acid (S)-2-({1-[4-((4aR,10bS)-9-ethoxy-8-methoxy-2-methyl-1,2,3,4,4a,10b-hexahydro-benzo[c][1,6]naphthyridin-6-yl)-phenyl]-methanoyl}-isopropyl-amino)-propyl ester,

4-Nitro-benzoic acid (R)-2-({1-[4-((4aR,10bS)-9-ethoxy-8-methoxy-2-methyl-1,2,3,4,4a,10b-hexahydro-benzo[c][1,6]naphthyridin-6-yl)-phenyl]-methanoyl}-isopropyl-amino)-propyl ester,
 4-((4aR,10bS)-9-Ethoxy-8-methoxy-2-methyl-1,2,3,4,4a,10b-hexahydro-benzo[c][1,6]naphthyridin-6-yl)-N-((S)-2-hydroxy-1-methyl-ethyl)-N-isopropyl-benzamide,
 4-((4aR,10bS)-9-Ethoxy-8-methoxy-2-methyl-1,2,3,4,4a,10b-hexahydro-benzo[c][1,6]naphthyridin-6-yl)-N-((R)-2-hydroxy-1-methyl-ethyl)-N-isopropyl-benzamide,
 a salt or an N-oxide thereof or a salt of the latter.

7. A compound of formula 1 as claimed in claim 1, in which the hydrogen atoms in positions 4a and 10b are in the cis position relative to one another.
8. A compound of formula 1 as claimed in claim 1 which have with respect to the chiral centers the configuration shown in formulae (1*) or (1**):



9. A compound of formula 1 as claimed in claim 1 for treating diseases.
10. A pharmaceutical composition comprising one or more compounds of formula 1 as claimed in claim 1 together with customary pharmaceutical auxiliaries and/or excipients.
11. The use of a compound of formula 1 as claimed in claim 1 for producing pharmaceutical compositions for treating respiratory disorders and/or dermatoses.
12. A method for treating an illness treatable by the administration of a PDE3/4 inhibitor in a patient comprising administering to said patient in need thereof a therapeutically effective amount of a compound of formula 1 as claimed in claim 1.

13. A method for treating airway disorders and/or dermatoses in a patient comprising administering to said patient a therapeutically effective amount of a compound of formula 1 as claimed in claim 1.